

**Technical Assistance Facility (TAF) for the Government of Lebanon**  
**Evaluation of the Ministry of Agriculture support**  
**to the olive sector in Lebanon**

Report

**Assessment of the Monitoring & Evaluation Systems**  
**and Processes of the Strategy (2014-2019) of the**  
**Ministry of Agriculture**



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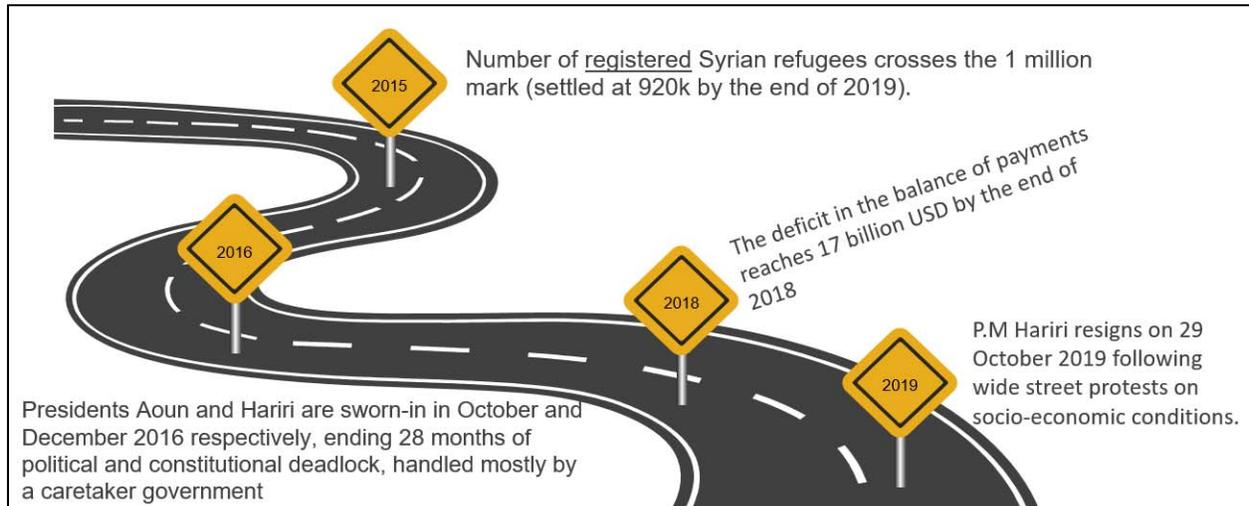
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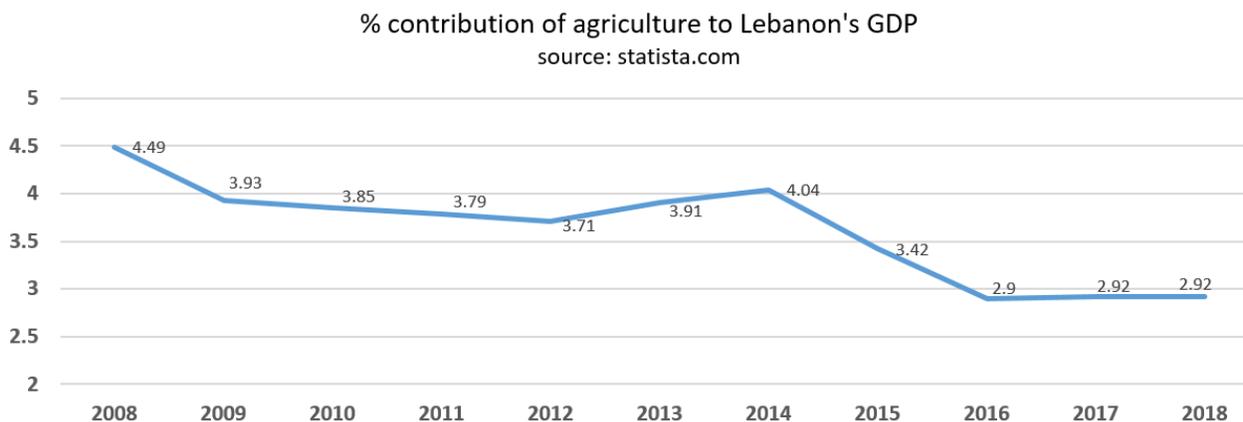
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## 1. Introduction

The strategy of the Ministry of Agriculture (MoA) was launched in November 2014 and covers an implementation period of 5 years (2015 thru 2019). This coincided with one of the most troubled geo-political era of Lebanon, with *inter alia* a rampant crisis in Syria, political blockages and deadlocks in Lebanon, declining economic performance and – most recently – massive protests sparked by socio-economic discontent that led to the resignation of the government.



The general declining performance of the Lebanese economy and its vulnerability to shocks affected the performance of the agricultural sector during the period of implementation of the strategy, as highlighted in the graph below, which shows the evolution of the contribution of the agricultural sector to the GDP of Lebanon over the past 10 years. Both agriculture and industry have been steadily losing grounds to the services sector, but the financial crisis of the last quarter of 2019 can become potentially a game changer and an opportunity to grasp when developing the new strategy for 2020-2024.



A technical note prepared by the World Bank in 2018 on “the role of food and agriculture for job creation and poverty reduction in Jordan and Lebanon” identifies a strong potential for agriculture in Lebanon, both for the domestic and the export market. The report also stresses the need to address key issues hindering the development of the sector such as i) limited access to rural

finance, ii) poor agricultural technologies, iii) water use inefficiency and iv) poor-quality standards. are some of the major challenges for the overall agricultural and food sector, and stresses on the importance of strategic policy-making to propose, adopt and implement enabling policies to improve agricultural productivity and competitiveness.

## 2. The MoA strategy for 2015-2019

### 2.1 Background

In 2010 MoA formulated an agricultural sector development strategy for five years (2010-2014). This strategy included eight main axes of implementation aiming at increasing competitiveness of the Lebanese agricultural products and fostering agricultural sustainable development. In 2015 a follow-up strategy was formulated for (2015-2019 using a participatory approach in strategic planning. Ten multi-stakeholder Technical Working Groups were established to conduct this exercise with the facilitation of external experts. The table below provides a comparison of the strategic directions on the two strategies which are – to a great extent- quite complementary.

<b>Comparison between the Axis of implementation of the MoA Strategies for 2010-2014 and 2015-2019</b>	
<i>MoA Strategy 2010-2014</i>	<i>MoA Strategy 2015-2019</i>
1. Updating the regulatory/policy framework	1. Improve food safety and quality of locally produced and imported products
2. Enforcing control over all agricultural products, inputs, forests, fishing, and fisheries	
3. Developing value chains, focusing on better quality, production, marketing and export of agricultural products	2. Increase productivity and competitiveness of the Lebanese agricultural products
4. Upgrading agricultural infrastructure and increasing efficiency of natural resources use	3. Improve the good governance and sustainable use of natural resources
5. Re-activating agricultural extension services and education	4. Strengthening agricultural extension and education
	5. Strengthening agricultural research and laboratories
6. Establishing a credit scheme for small and medium projects	6. Development of cooperative sector and mutual funds
7. Developing MoA's new structure and improving coordination with the public, private and civil society sectors	7. Development of the Ministry of Agriculture's Capacities
8. Conservation of natural resources - Soil, forests, biological diversity, rangelands and pastures, and fisheries	8. Responding to climate change impacts

The directions set in the new strategy were quite ambitious and required considerable resources for their implementation, extending well beyond the available budget of MoA. The needed resources were estimated at around 330 million USD, divided as follows:

- Legislation, control and inspection: USD 4 million
- Communication and extension: USD 8 million
- Research and studies: USD 5 million
- Capacity development: USD 48 million
- Development programmes: USD 265 million

## 2.2 M&E provisions in the strategy

In terms of M&E provision, the strategy foresees that a Steering Committee will review and approve annual operational plans prepared by the related departments, manage the risks that may arise during execution, mobilize funds and identify financial resources, and review and approve the strategy Monitoring and Evaluation reports (the first report in 2 years, and the second 6 months prior to the end of the strategy).

In practice, reports on the implementation of the strategy were prepared in 2015 and 2016 by the Development Projects and Programmes Department of MoA, but the reported progress was low due to the lack of funding, especially tone of the assumptions of the strategy was the ability to mobilize 265 million USD for implementing its different programmes, and another 53 million USD for research, studies and capacity development. The Department released another progress report in 2018, but most of the data in this report related to the tasks performed by the different departments and divisions rather than the progress towards the strategy *per se*.

The strategy includes an elaborate Logical Framework with a rather heterogeneous mix of output, outcome and impact indicators that difficultly lend themselves to an evaluative exercise. The strategy also identifies two essential pre-requisites without whom all proposed projects and initiatives would not be possible to achieve:

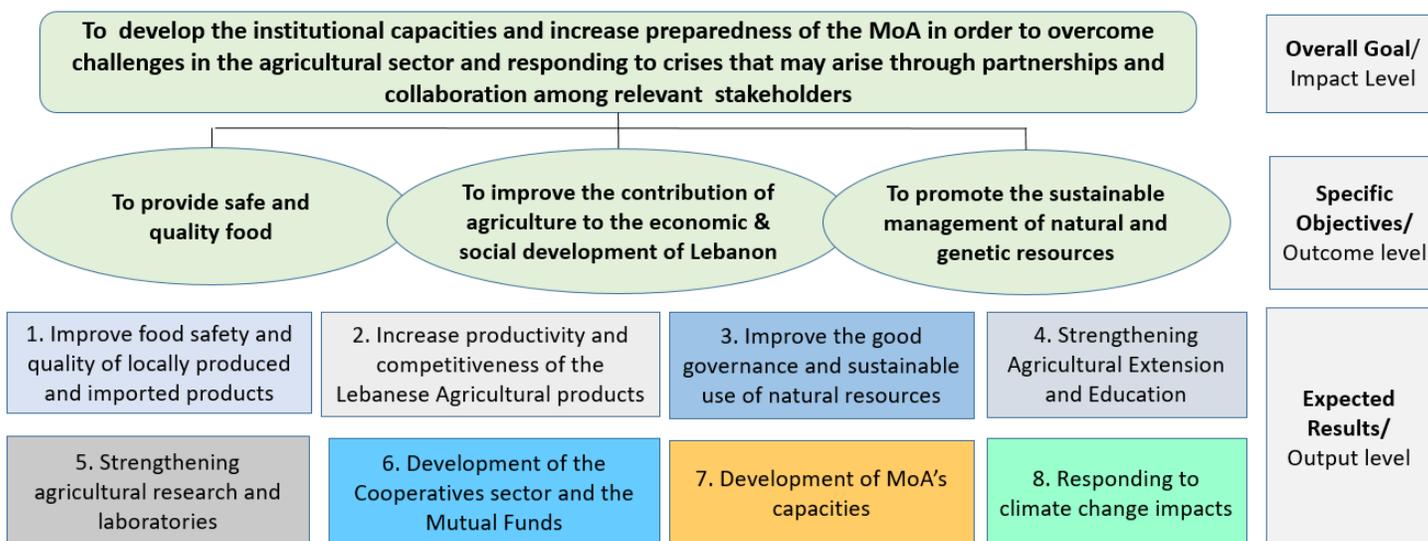
- **Establishing an integrated Monitoring, Evaluation and risk management system** for the different plans, programmes and projects, as well as a system to evaluate staff performance and link to a professional and financial incentives mechanism.
- **Establishing a fundraising mechanisms, coupled with a proactive communication and media plan** in order to increase the chances for funding the strategy.

Both pre-requisites were not addressed in the required depth according to the evidence collected during the process of preparing this report; **It must be clear however that (i) an integrated M&E strategy, (ii) a comprehensive risk management strategy, (iii) an effective fundraising strategy and (iv) a communication and outreach strategy are all essential pre-requisites for any future MoA plans in developing the (2020-2024) strategy.**

The narrative part of the strategy was translated into a Logical Framework drawn along the **old Logframe model for EU-funded projects** (one overall goal, three to five specific objectives, a series of expected results with corresponding activities). From 2016 onwards, the EU revised the logframe template in order to make it more results-driven where “overall goal” becomes the anticipated impact of a project, programme or strategy, “specific objectives” gets differentiated

into intermediate and longer-term outcomes relating to the changes in knowledge, attitudes or practices and “expected results” become outputs. **It is hence strongly advised to develop the logframe of the strategy for 2020 along the new EU logframe model.**

The Logframe of the strategy proposes an overall goal and three specific objectives. It also includes **eight expected results that are called “courses of action”** in the narrative, each associated with a set of objectively verifiable indicators. The eight “courses of action” are then detailed into 30 “components” (activities) and 104 “areas of intervention”. **The confusion in terminology** (course of action, area of intervention, component, etc...) **and the mixing-up in definitions is a significant problem affecting the evaluability and overall coherence of the strategy.**



The way the overall goal (impact level) is formulated suggests three key areas that the strategy aims to achieve: i) improved institutional capacity for MoA ii) increased preparedness of MoA to respond to crisis facing the agricultural sector and iii) partnerships and collaboration amongst the different stakeholders of the sector. One would hence expect to see a significant number of indicators geared towards these 3 areas in the M&E framework associated with the strategy. However the only indicator linked to the overall goal in the logframe is “*to achieve the objectively verifiable indicators of the specific objectives by the end of 2019*”. **The absence of indicators at the overall goal level (impact indicators) is another problem affecting the evaluability and overall coherence of the strategy.**

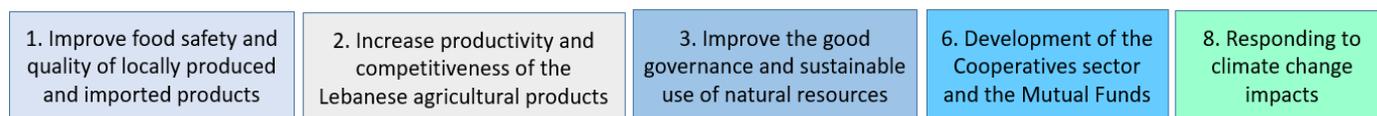
The specific objectives (outcome level) also defines 3 key areas to be achieved: i) to provide safe and quality food, ii) to improve the contribution of agriculture to the economic & social development of Lebanon and iii) to promote the sustainable management of natural and genetic resources.

The previous overall goal mentions “strengthening the capacities of MoA” as a central element, yet the same formulation is used in one of the “courses of action” (#7); It also mentions “improving MoA’s preparedness in responding to crisis” which is a typical outcome rather than an impact (the impact being what would change for the better of MoA is better prepared to address risks).

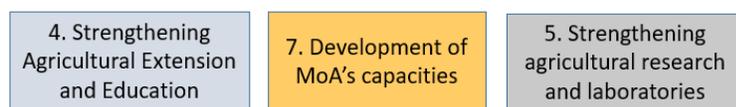
### 3. Strengthening logframe coherence in the strategy

This review proposes to deconstruct and the reconstruct the logical framework in order to improve evaluability and coherence. The new proposed model for the logframe clusters the eight “courses of action” (outputs/results according to logframe definition) into two categories:

- a) Five thematic “courses of action” which define most of the initiatives and activities described in the strategy.



- b) Three operational cross-cutting “courses of action” linked primarily to MoA’s internal capacity processes, and their operational implications concerns only MoA.



Based on this distinction, the review checked the alignment between the lower levels of the logical framework (inputs and activities, described as 30 “components” and 104 “areas of intervention”) with the upper levels (general goal, specific objectives and results to be achieved) and whether the activities mentioned in the lower levels match the themes (and ambitions) of the eight “courses of action”.

Based on the review, the different activities proposed in the strategy appear to be better aligned with the specific objectives related to food safety, natural/genetic resource management and capacity development of MoA, but fall short when it come to the contribution of agriculture to the economic and social development of Lebanon, where **most proposed activities do not match the ambitions expressed in the strategy** (increasing the contribution of agriculture to the GDP by 6%, improving the income of rural households, harnessing the contribution of women and youth to agriculture, etc...)

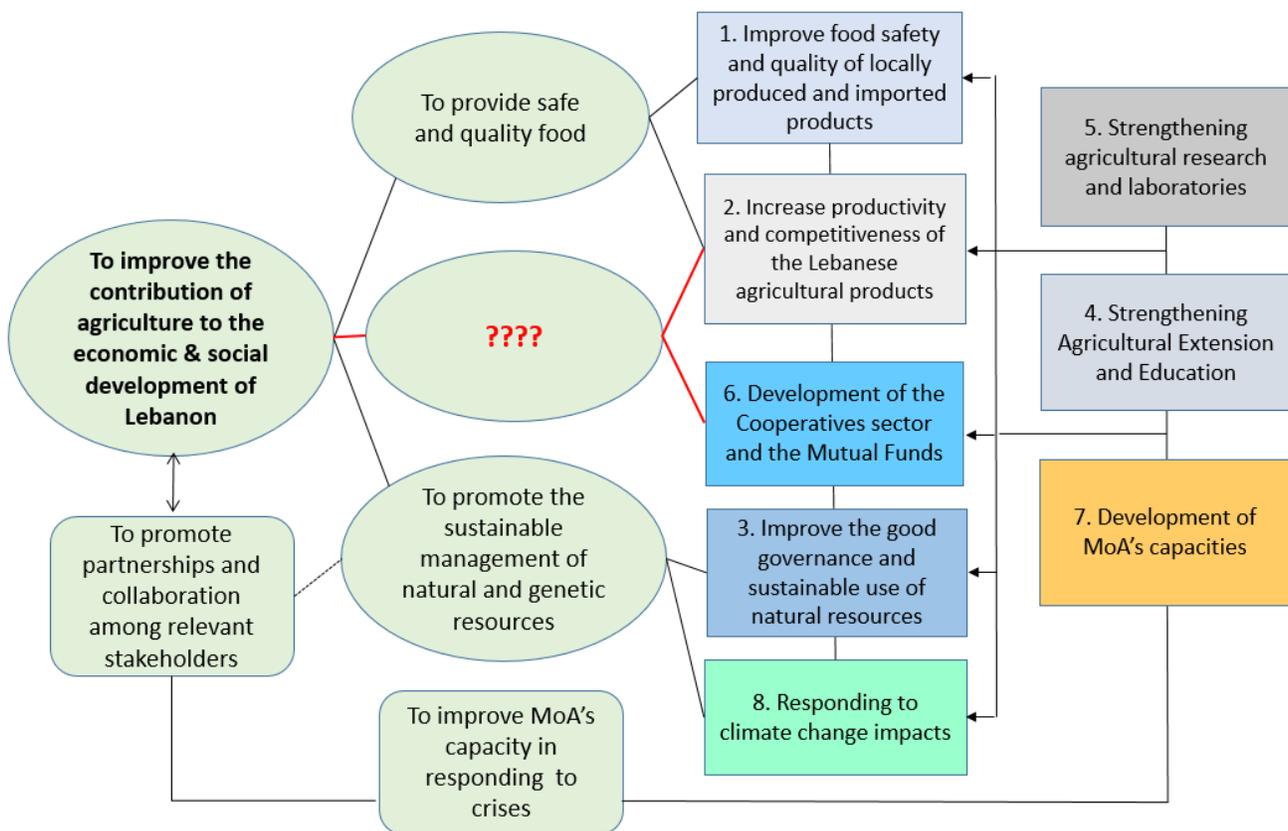
The review also reveals that improving the contribution of agriculture to the economic and social development of Lebanon (formulated as a specific objective) seems to be the central element around which the strategy is built. This is why it proposes to re-shuffle the building-blocks so that **improving the contribution of agriculture to the economic and social development of Lebanon becomes the overall goal** and the other building-blocks are re-arranged accordingly.

By virtue of this re-arrangement, one can clearly see that the **two “courses of action”** related to “increasing the productivity and competitiveness of Lebanese agricultural products” but also the “development of cooperatives and mutual funds” **lack a corresponding specific objective that helps sharpening them and giving them more focus**: what concrete means will be mobilized to increase productivity and competitiveness? which sectors will be given priority under the strategy? how would the strategy ensure connects these sectors to existing cooperatives, how it proposes to address the weaknesses of the cooperative sector and how access to mutual funds will be catalysed and/or improved to help achieve the intended objectives? etc... unfortunately all these questions

are not addressed in the required degree of detail and sectorial specificity; this should be taken into consideration when developing the new strategy for (2020-2024) in order to achieve the desired change.

Useful to mention as well that “strengthening the capacities of MoA” is formulated as part of the overall goal, yet the same formulation is used in one of the “courses of action” (#7); It also mentions “improving MoA’s preparedness in responding to crisis” which is a typical outcome rather than an impact (the impact being what would change for the better of MoA is better prepared to address risks). In all cases, the new strategy should be able to clearly distinguish the endogenous factors (ie those related to the institutional and operational capacity of MoA) with exogenous ones (ie those related to sectorial priorities).

### Strengthening the Logframe Coherence of MoA’s Strategy – New Proposed model

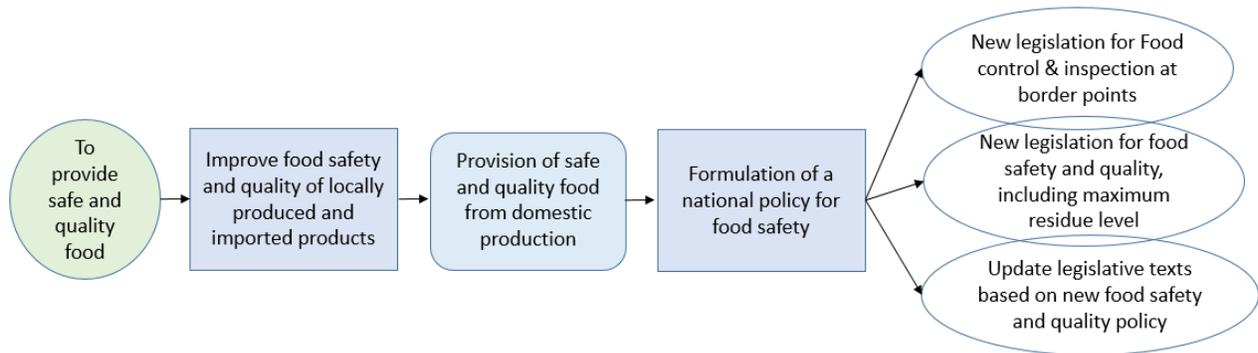


The 104 “areas of intervention” of the strategy can be divided into 7 main headings: legislation, programmes, capacity building, studies, equipment, publications and outreach. **A balanced mix of activities under these main headings would be needed in order to achieve the strategy.**

**4.1 Developing new legislation or revising existing ones:** the strategy foresees *developing 13 new legislations and updating and/or revising 15 existing ones*; these are essential prerequisites for many other interventions, especially in areas where policy guidelines do not exist or need to be revised. For example, the specific objective “to provide safe and quality food” is organically linked to intervention area 1.3.1 “*Formulation of a draft national policy for food safety and updating the related legislations*”. The national policy for food

safety would then guide other actions such as the “*Development of the legislative and operational framework of controllers and inspectors at border points...*” (1.1.1) or *revising all related texts in light of the approved legislation* (1.2.1)

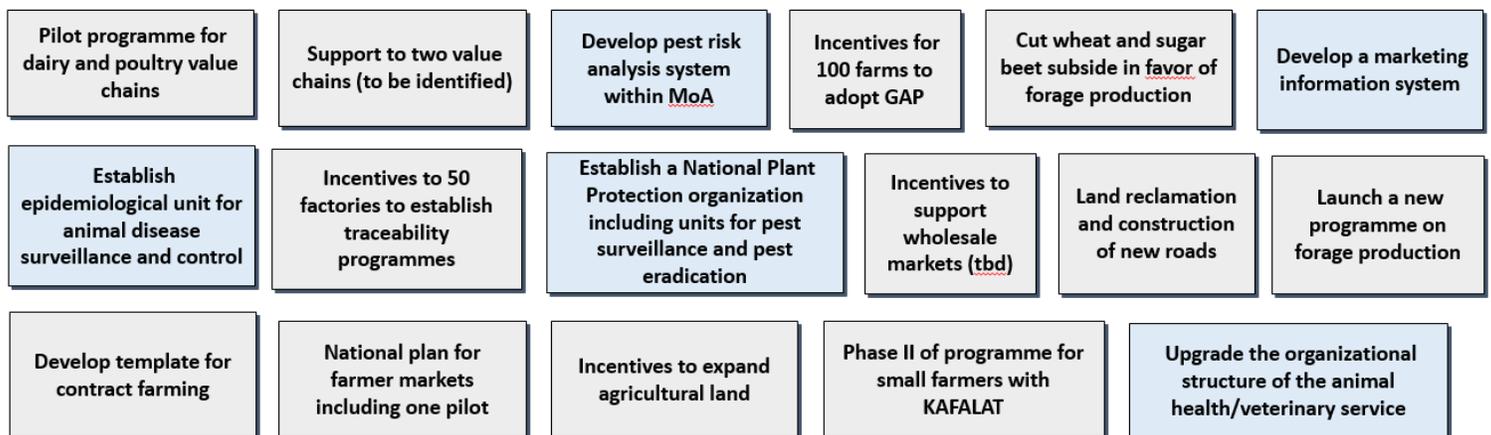
Without the sequential implementation of these measures, an indicator such as “decrease in food export returns due to safety and quality of imported food by 50% in 2019” would not be possible to achieve.



**4.2 Launching new programmes, units and services:** the strategy foresees *launching no less than 47 new programmes across its eight main courses of action, as well as 21 new and/or reactivated units or committees within MoA*. The cumulative cost of these programmes was estimated at 266 million USD back in 2015 with MoA committing to mobilise funds through liaising with bilateral and multi-lateral donors.

Some of these programmes are external (for example incentive to 100 farms to adopt GAP) while others are more internal to MoA (for example developing a pest risk analysis system). In both cases, the strategy should be more explicit about their intended uses (what is the significance of 100 farmers adopting GAP to the agricultural sector at large, what are the mechanisms for the use of the pest risk analysis system and what is its projected benefit to the agricultural sector at large, etc...)

The boxes below highlight the means of implementation for course of action 2 “Increase productivity and competitiveness of the Lebanese agricultural products”. Interesting to note as well that some of these programmes are well defined while others were to be determined during implementation.



- 4.3 **Training of MoA staff:** with *no less than 35 training topics* identified across the eight courses of action. Some of these trainings topics are cross-cutting such as trainings on administration or communication, while others are more specialised and technical. These trainings are also often linked to “conducting assessments and studies” as part of the process.
- 4.4 **Conducting Assessments and studies:** *around 50 topics for assessments and studies* are identified across the strategy and range from sector-specific studies such as the management of veterinary drugs and food additives to organizational ones such as developing a fundraising strategy for MoA or analysing existing farmer support policies and proposing new ones. The completion of these assessments and studies is also an essential pre-requisite for engaging in many of the activities foreseen in the strategy.
- 4.5 **Acquiring and/or upgrading equipment:** the strategy foresees *purchasing and/or/upgrading 23 categories of equipment* in order to complete the programmes and activities foreseen in the eight courses of action. For example, it proposes to raise the tree nursery capacity of MoA to two million trees/year, modernise the equipment of forest and marine guards and upgrade the research and laboratory facilities of MoA. Availability of this equipment is also an essential pre-requisite for engaging in many of the activities foreseen in the strategy.
- 4.6 **Publications and media support:** some *15 publication topics or media support are foreseen* as part of the strategy, which is a relatively low number compared to other categories. Topic of these publications include extension material on forest management, fishing techniques, use of wastewater in agriculture, etc... In fact, the adoption of the strategy and the sustainability of the interventions that are proposed implies a more “aggressive” media and outreach effort and should be factored into the new cycle of planning.
- 4.7 **Communication and outreach:** the strategy foresees *20 communication and/or outreach initiatives* such as media campaigns to promote exports crops or to encourage women and youth engage in agricultural activities. It also foresees the *creation of eight different multi-stakeholder groups or initiatives* bringing together farmer organisations, private sector, academia, but also other line Ministries, etc...

One of the most important innovations introduced by the strategy (and explicitly stated in its overall goal) is partnerships; as such the strategy foresees the *creation of eight different multi-stakeholder groups or initiatives* bringing together farmer organisations, private sector, academia, but also other line Ministries, etc... These include establishing a multi-stakeholder climate change committee to advise on strategy and steer MoA’s efforts, a communication network with partners working in the field of rural and agricultural development, a network for sharing and management of agricultural knowledge, etc... It also proposes to establish an Agriculture Export Promotion Committee, with working groups per category of agricultural product.

The importance of these groups cannot be understated, as the overall goal of the strategy mentions clearly “partnerships and collaboration among relevant stakeholders” as one of the means for achieving the strategy, yet none of the indicators relates to the multi- stakeholders work foreseen

in it. The strategy also foresees mechanisms for involving end-users in policy making through public consultations, or through sector-specific committees. Again the importance of these approaches cannot be under-stated as it allows all stakeholders of the agricultural sector to take ownership of the strategy and find a place in its implementation.

A recent example was the national validation workshop of the evaluation of MoA’s support to the olive sector, which was able to produce a comprehensive roadmap for developing and supporting the olive sector in just one day. This was made possible by bringing together 85 stakeholders representing the different industry sectors: agricultures cooperatives representatives (presidents and members), MoA staff, Unions of Cooperatives, NGOs, members of the Agricultural Engineers orders, Economic Council members, LARI representatives, olive companies, Unions of Municipalities and Municipalities, olive millers, Chambers of Agriculture, Industry and Commerce and UN agencies. **Partnerships is the best way forward!**

To close this section, the table below recaps how activities are distributed along the different “courses of action” in the strategy.

	New legislation	New Programmes	Training topics MoA	Studies	Equipment types	Publications	Outreach
1. Improve food safety and quality of locally produced and imported products	2 new 1 update	3 new	1	3	2 1 certification	---	2
2. Increase productivity and competitiveness of the Lebanese Agricultural products	7 new 3 updates	13 new 4 internal	10	16	4	6	8 2 Multistakeholder groups
3. Improve the good governance and sustainable use of natural resources	2 new 2 updates	13 new	5	10	5	6	5 2 Multistakeholder
4. Strengthening Agricultural Extension and Education	3 updates	5 new	2	4	1	1	1 1 Multistakeholder
5. Strengthening agricultural research and laboratories	1 update	7 new 3 internal	1	4	10	---	2
6. Development of the Cooperatives sector and the Mutual Funds	1 update	5 new 1 internal	3	3	---	---	1
7. Development of MoA’s capacities	2 new 4 updates	1 new 11 internal	12	8	1	1	1 2 Multistakeholder
8. Responding to climate change impacts	---	1 internal	1	2	---	1	1 Multistakeholder
<b>Total</b>	<b>13 new 15 updates</b>	<b>47 new 21 internal</b>	<b>35</b>	<b>50</b>	<b>23</b>	<b>15</b>	<b>20 8 Multistakeholder</b>

## 5. Revisiting the indicators in the Logframe of the strategy

Indicators are essential building-blocks of any M&E plan. However indicators should be formulated along a SMART approach (Specific, Measurable, Achievable, Relevant and Time bound) in order to be monitored and subsequently evaluated.

Some higher-level indicators of the strategy need an in-depth revision in order to turn them to SMART ones, while some others are properly formulated but not aligned with activities as highlighted in the table below

Specific Objective indicators of the strategy	Remarks
Increase public expenditure on agriculture from 0.5% to 0.7% of the total national expenditure in 2019	The formulation of this indicator is SMART; its content however relates to a higher-level decision to be taken at the Council of Ministers and cannot be considered an indicator <i>per se</i> .
Increase the contribution of agriculture to the GDP of Lebanon from 4% in 2011 to 6% in 2019	The formulation of this indicator is SMART; however it is too ambitious (50% increase in 5 years) and can only be achieved if coupled with massive investments by the government and the private sector, none of whom is foreseen in the activities.
Increase agricultural production to 3 billion USD in 2019 (2.36 billion USD in 2011), representing a yearly growth rate of 3.4%;	The formulation of this indicator is SMART and more realistic than the previous indicator, although not completely aligned with proposed activities.
Reduce the annual deficit in the trade balance between exports and imports of agricultural and food products from the 20% average of the past five years to 23% in 2019	The formulation of this indicator is SMART, includes a baseline (20%), a target (23%), a time frame (5 years) and seems
Stabilize and prevent the decrease in farmers' income	Such statements cannot be considered as indicators: <ul style="list-style-type: none"> <li>- The first one repeats the obvious (if the income is stabilized then it will not decrease de facto)</li> <li>- They are too broad (ie not specific) to be measured</li> <li>- They are not quantified neither at baseline nor at endline levels</li> </ul>
Stabilize the rural population	
Increase the proportion of the labour force in agriculture	
Increase household income deriving from fishing and agricultural activities in rural areas	This is a classical impact indicator, but lacks precision (where, when, how much?). It is also disconnected from the vast majority of the activities foreseen in the eight courses of action
Decrease the rate of food poisoning cases in hospitals	This indicator works best for the Ministry of Health, as food poisoning is caused by multiple factors, many of whom outside the control of MoA (handling, hygiene, etc...).
Decentralization of analysed samples to the regional Labs from 10% to 25% in 2019;	These are valid indicators but focusing primarily at the output level (decentralization of laboratories, updating legislation) or management decisions (increasing expenditure on natural resources management)
Increase MoA expenditure on the implementation of sustainable management plans of natural resources	
New and updated legislative provisions related to the sustainable management of natural resources	

An output/activity indicator in the lower half of the logical framework measures an immediate, tangible, observable result (for example drafting or revising a policy or a law). At output and outcome levels, the indicator measures what is being done better or differently because of this policy or law. **The formulation of an indicator hence differs depending on its context** as highlighted in the table below.

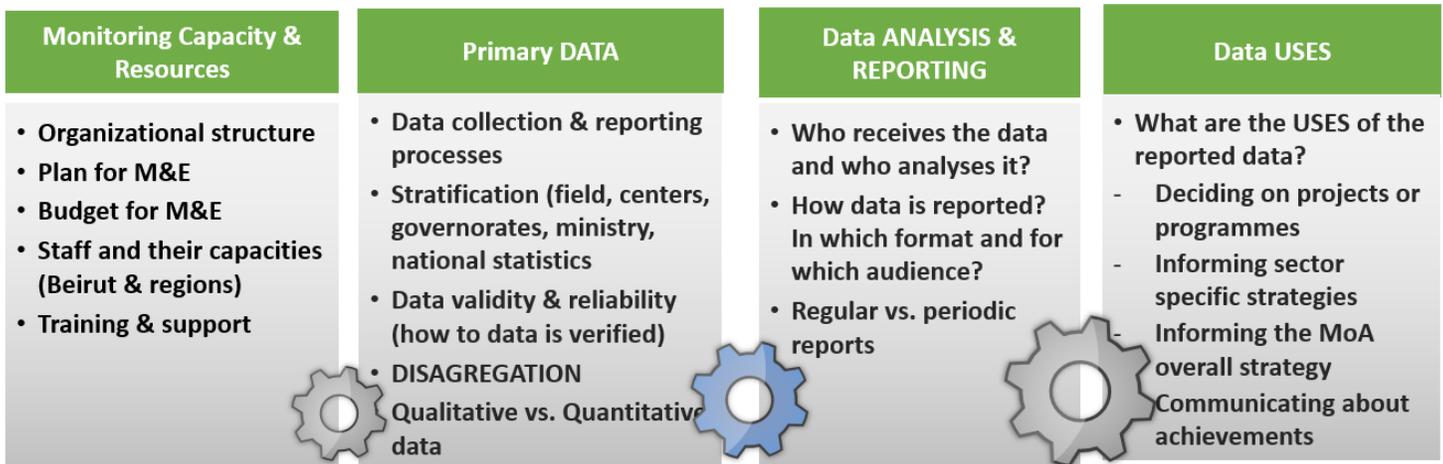
Strategy	Example of outcome or impact level indicators
<b>Improving MoA Capacity</b>	<p>How the improvement in MoA’s capacity will allow it to do things better or differently? Example of indicators:</p> <ul style="list-style-type: none"> <li>• New laws proposed to the agriculture committee in parliament that are approved and how they impact positively the sector?</li> <li>• How MoA programmes are translating into a contribution of agriculture towards achieving the SDGs? (SDG1 = impact on poverty, SDG5 = gender equality, SDG6 = water, SDG8 = decent work and economic growth, etc...)</li> <li>• How MoA is positively impacting the plans and programmes for achieving food security in Lebanon?</li> </ul>
<b>Increasing risk preparedness</b>	<p>What type of risks MoA has been addressing and how? (compared to the baseline which is how things were addressed before the strategy) Example of indicators:</p> <ul style="list-style-type: none"> <li>• Risk management systems in place and how they are used by farmers? (for example early warning systems, emergency assistance mechanisms? etc...)</li> <li>• Amount of crop/livestock losses prevented through risk preparedness plans (compared to the average before the strategy)?</li> </ul>
<b>Partnerships and collaborations</b>	<p>What new partnerships were put in place and how they are contributing to the improvement of the agricultural sector? Example of indicators:</p> <ul style="list-style-type: none"> <li>• What multi-stakeholder committees are in place and how they are contributing to the improvement of the sector? (increased investments, collaborative policy development, etc...)</li> <li>• Sectorial impact (climate change, water efficiency/saving, health and wellbeing, increase in exports, etc...)</li> </ul>

## 6. Monitoring and Evaluation of the strategy: where to find data?

The central paradigm of the evaluation discipline is “what gets measured gets done”. Without a **clear system for generating, analyzing and reporting the data**, it will be very difficult (not to say impossible) to assess whether a strategy has served its intended objectives or not.

Despite the limitations in the M&E design of the strategy and the chronic under-funding of the Ministry, Development Projects and Programmes Department has taken the challenge to compile regular reporting around the progress towards achieving the strategy (twice a year in 2015 and on yearly basis thereafter).

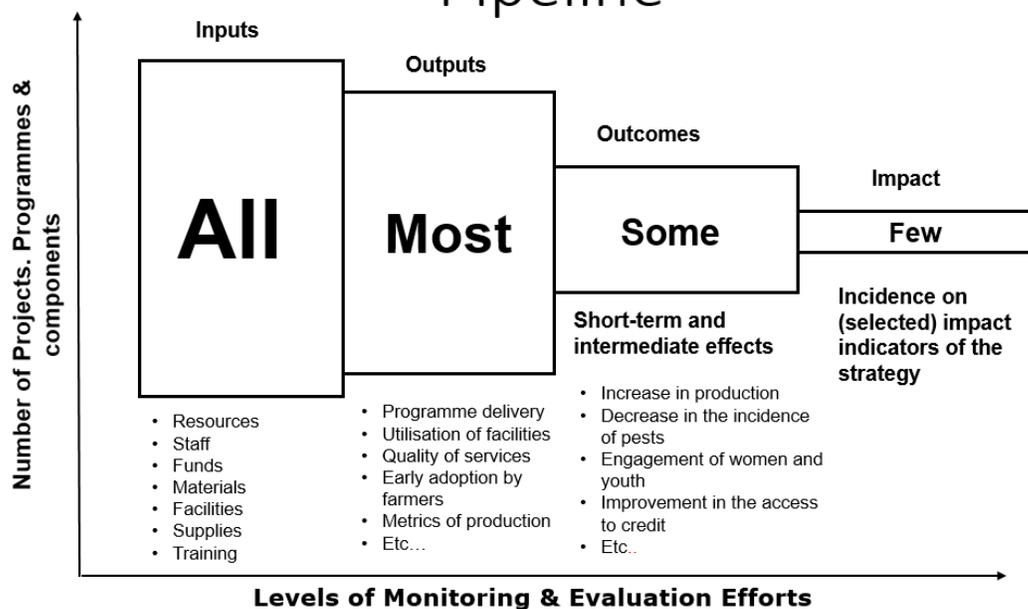
Nevertheless, it is important to review in depth the process of data collection within MoA in preparation of the new strategy, bearing in mind the inter-linkages of the data chain highlighted in the figure below.



The process of data collection is often referred to as the “data funnel”, highlighting how the data collection and utilization design should be prioritized. Large amounts of data need to be collected at the input and output levels, but fewer and more strategic data should be collected at the outcome and impact level.

International experiences have proven that good quality data informs good strategic decisions and vice-versa. The OECD for example recommends to dedicate 3-5% of the budget on any project and programme for M&E<sup>1</sup> because the data collected throughout the implementation of this project or programme is key for Evidence-based decision making. It applies to the simplest sectorial decision, such as investing resources in a programme supporting citrus or olive to complex policy decisions related to investments, subsidies and massive infrastructure works.

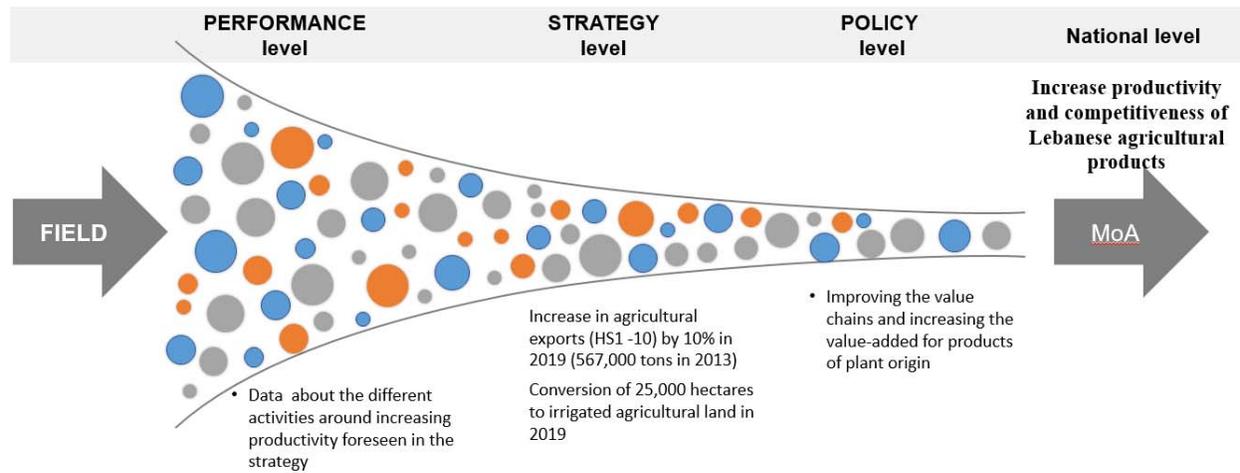
## Monitoring & Evaluation Pipeline



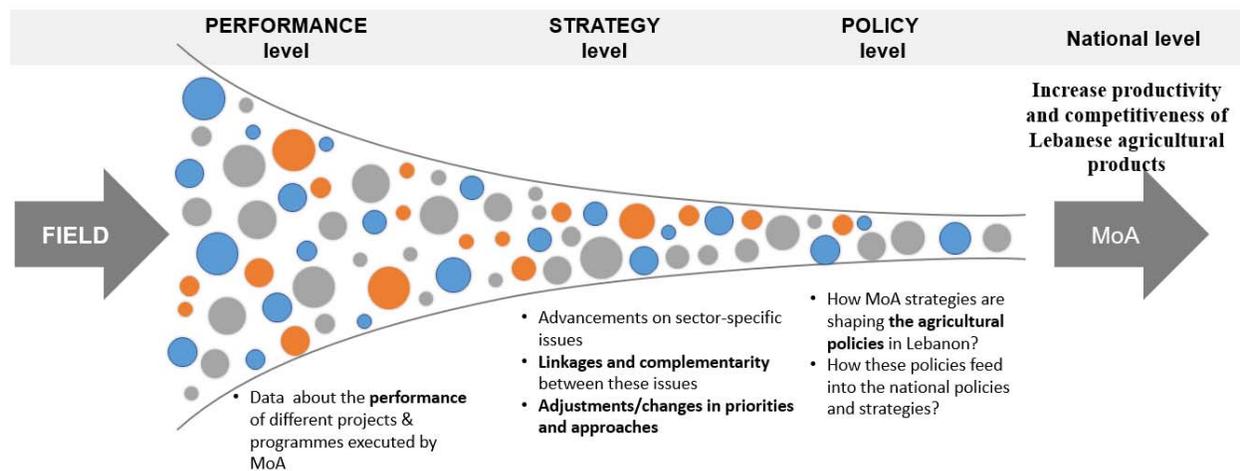
<sup>1</sup> <https://www.oecd.org/development/evaluation/dcdndep/47069197.pdf>

Under its present organizational setup, MoA cannot realistically collect everything related to its work, unless the M&E function – which is organically tied to the statistics function within MoA – is re-thought in depth. Any future strategy should try and address this limitation through appropriate measures and means. On a positive note, an advanced M&E training done for a group of 25 middle and senior staff of MoA as part of this assignment in August 2019 revealed very promising individual talents who can be mobilised and empowered as part of the process.

Increasing the productivity and competitiveness of Lebanese agricultural products requires a set of activities defined in the strategy. These activities should serve pre-identified strategic directions (for example increasing exports and irrigated land) who – in turn – should be aligned with a pre-identified policy direction (for example improving and promoting specific value chains)



Higher-level data implies a mix of MoA-specific data (through its own data collection systems) as well as a smart and strategic interpretation of other data sources such as national statistics.



**Track1: Improve food safety and quality of locally produced and imported products**

Indicator	Intervention	New legislation/policy	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
1.1 Provision of safe and quality food from domestic production	1.1.1 Development of the legislative and operational framework of controllers and inspectors, and health juridical control	Food control and inspection at border points		Food safety Continuous (60 pax * 3 days * 2 times/year))	Legal (1 month) for developing food control and inspection at border points			
	1.1.2 Strengthening the control and inspection of food facilities	Food safety and quality, including maximum residue level	Evaluation & registration of food facilities			Acquire ISO 17-020 for MoA labs Upgrade lab facilities (28 local centres. 7 regional agencies 4 central agencies)		1,500 inspection visits/year
	1.1.3 Awareness and communication campaign about the importance of food facilities registration							40 events Media campaign
	1.1.4 Development of a system for contaminants monitoring programmes		Permanent system for monitoring food contaminants within MoA		Technical expert for developing a monitoring plan for the monitoring of food contaminants			
	1.1.5 Participation the development of international standards for food safety and quality		Strengthening the National Committee for Codex Alimentarius					
1.2 Provision of safe and quality food from imports	1.2.1 Strengthening legal and operational control and inspection capacities at border points	Food control & inspection at border points (duplicate)				Screening tests for inspectors		
	1.2.2 Improving the level of infrastructure at the border control points					Infrastructure for border point control		
1.3 Contribution to the formulation of a food safety policy	1.3.1 Formulation of draft a national policy for food safety and updating the related legislations	National policy for food safety	Embed food safety policy in Codex Alimentarius (counted as same 1.1.5)		Food safety systems expert for 3 months			
		Updating related legislation based on the approved policy						

**Track 2: Increase the productivity and competitiveness of the Lebanese agricultural products**

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
2.1 Improving the value chains and increasing the value-added for products of plant origin	2.1.1 Strengthening the management of agricultural inputs	Management of agricultural inputs		30 persons for 5 days	Management of agricultural inputs (legal expertise to update the law. 3 month) Fertilizers (1 month)		Manual for the classification of fertilizers	
		Use of food and farm waste for compost			Use of food and farm waste for compost (3 months)			
	2.1.2 Improving the performance of agricultural inputs producers				Production of propagating material and their handling (3 months) Seed multiplication & handling (1 month)		Guide for seed multiplication and handling	Outreach to input producers
	2.1.3 Implementation of development programmes for a number of agricultural value chains		Two value chains to be identified and targeted					
	2.1.4 Promoting Good Agricultural Practices through the support of organic farming and obtaining quality certificates		Incentives for 100 farms	50 persons for 5 days	Identification of requirements for quality certificates for organic farming (3 months)			Training of farmers 6 trainings * 30 regions
2.2 Improving the value chains and increasing the value-added for products of animal origin	2.2.1 Strengthening the management of veterinary drugs and feed additives	Management of veterinary drugs & feed additives		50 persons for 5 days	veterinary drugs & feed additives (legal expertise, 3 months)		Manual of inspection and control of veterinary drugs & feed additives	
	2.2.2 Development of the Animal feed sector	Forage quality & forage production requirement	Launch a new programme on forage production		Feasibility study for forage production	Creation of silos for forage grains		
			Cut wheat and sugar beet subsidy in favour of forage production					
	2.2.3 Implementation of development programmes for a number of value chains of animal origin	Transparency of marketing of products of animal origin	Pilot programmes for dairy and poultry value chains (tbd)					
	2.2.4 Extension on Good Farm Management and the application of bio-security measures			40 persons for 5 days				5 trainings for farmers in each of the 7 regions
2.3 Strengthening the phytosanitary measures	2.3.1 Updating phytosanitary legislations and management organizational structure based on international standards	Update plant protection legislation	Establish a National Plant Protection organization including Units for pest surveillance and pest eradication	Needed but not defined		Needed but not defined		
	2.3.4 Improving the phytosanitary import regulatory system based on international standards		Develop Pest risk analysis system within MoA	Train inspection staff on phytosanitary import regulatory system		Rehabilitate & equip border point centres		
	2.3.5 Improving the plant export certification system based on international standards						Develop export certification manual	
2.4 Strengthening the animal health measures	2.4.1 Updating animal health legislations and management organizational structure based on international standards	Review and update animal health legislation (veterinary law & implementation decrees)	Update the organizational structure of the animal health/veterinary service	Train inspection staff animal health legislations		Laboratories (cooperation & accreditation agreements)		
	2.4.2 Strengthening MoA capacities in animal diseases surveillance, control and containment		Establish epidemiological unit for animal disease surveillance & control				Develop animal surveillance manual	
	2.4.3 Development of the import/export and animal quarantine system in order to meet with the international standards			Train inspection staff (duplicate)	Risk analysis system for the import & export of products of animal origin	Equip border points (duplicate)	Develop export certification manuals	
2.5 Increasing agricultural exports	2.5.1 Facilitating the establishment of an Agriculture Export Promotion Committee from the public and private sectors	Review current trade and marketing policies & agreements						Establish Agriculture Export Promotion Committee, with working

								groups per category off agricultural product
	2.5.2 Improving the supply chain management and decreasing food losses at the level of packinghouses, cold storage and processing facilities	New legislation on decreasing food losses in packaging houses, cold storage and processing facilities	Incentives to 50 factories to establish tractability programme	Train inspectors (30 persons for 5 days)	Expert in traceability and food waste reduction (3 months)			Train food processing factories and centres on GMP
	2.5.3 Repositioning in the traditional markets and opening new markets for the Lebanese agricultural and food products		Develop a Marketing Information System		Expert to survey of National & Int'l markets and develop action programme (6 months)			Participation in national & international fairs, organization of trade missions
<b>2.6 Enhancing internal marketing channels</b>	2.6.1 Strengthening the wholesale markets	Review legislative framework about wholesale markets	Incentives to support wholesale markets (tbd)					
	2.6.2 Development of farmers and agricultural cooperatives markets		National plan for the establishment of farmer markets including one pilot		Marketing (farmers markets) expert (3 months)			
	2.6.3 Promotion of contract farming		Develop template for contract farming		Contract farming expert (3 months)			Provide incentives in cooperation with other programmes
	2.6.4 Advertising campaigns to promote the consumption of Lebanese agricultural products							Media campaigns to promote selected crops
<b>2.7 Developing national plans for the conservation and expansion of agriculture and irrigated areas</b>	2.7.1 Elaborate a plan to expand agricultural lands and to develop agricultural infrastructure at the level of the 8 Green Plan regions				Studies on how to increase reclaimed land and irrigated areas			
	2.7.2 Reclamation of lands and construction of agricultural roads		Land reclamation & construction of new roads					
	2.7.3 Studying the crops/varieties that have a demand in local and international markets and identification of the competitive advantages of producing it in Lebanon				Mapping of high value-added crops for the local and international markets National expert (6 months) and International expert (2 months)			
	2.7.4 Implementation at pilot level of the plans aiming to expand the agricultural lands		Incentives to expand agricultural land (linked to other incentive programmes)					
<b>2.8 Improving legal status of farmers and farmers organizations</b>	2.8.1 Preparation of a draft law and its application decrees to regulate agricultural and fishing professions	Preparation of a draft law + application decrees to regulate agricultural and fishing professions			Legal expert on the regulation of agriculture and fishing professions (12 months)			Multi-stakeholder consultation process to develop draft law on regulating agriculture & fishing professions
	2.8.2 Submission of the draft law to the Council of Ministers							
<b>2.9 Providing support to small-scale farmers and producers, and encouraging youth and women to engage in agriculture-related investments</b>	2.9.1 Preparation of feasibility studies for a number of agricultural projects and make them available to young people and women			Train MoA staff on the dissemination of feasibility studies	Feasibility study experts on projects suitable to attract women and youth to engage in agricultural projects (6 months)			Encourage women and youth to start agricultural projects based on a set of feasibility studies
	2.9.2 Continuation of the small and fruit trees farmers soft loans and guarantee fund in collaboration with KAFALAT		Phase II of programme for small farmers with KAFALT	Train MoA staff on providing technical assistance during loan preparation				

**Track 3: Improve Good Governance and sustainable use of resources**

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
<b>3.1 Strengthening good management and sustainable use of forests</b>	3.1.1 Promotion of good governance in forest management	Update legislation on forest management		Training for MoA staff on good governance in forest management	Legal expert forest management (3 months)		Production of Media & extension material on forest management	Outreach sessions (8 meetings per zone, 5 different topics)
	3.1.2 Afforestation and reforestation in order to increase the forested area		National master plan for afforestation & reforestation Afforestation and/or reforestation of 6,000 Ha		Continuous M&E of forestation efforts	Raise tree nursery capacity of MoA to 2 million seedlings per year		Extension to promote drought-resistant trees
	3.1.3 Protection from risks and pests that threaten forests		National forest-fire fighting strategy Integrated pest management of forests			Equipment for forest fire-fighting		
	3.1.4 Rationalize the harvest and investment of wood and non-wood forest products			Training of MoA staff and forest guards on wood and non-wood forest products	International expert on harvest and investment of forest products			
	3.1.5 Forest Resources Assessment				Study on quantity and value of forests every 3 years			
<b>3.2 Promoting sustainable investment and management of pasturelands</b>	3.2.1 Promotion of good governance in rangeland management	Update legislation on rangeland forest management		Build capacities of MoA staff in rangeland management			National campaign on the economic and environmental importance of rangelands	
	3.2.2 Assessment of rangelands and pastoral plants on a national level		Plan to manage and improve rangelands + 3 pilots					
<b>3.3 Improving the management of medicinal and aromatic plants and wild fruit trees sector</b>	3.3.1 Conservation and production of medicinal and aromatic plants			Train forest guards on harvesting of seeds of wild medicinal and aromatic plants	Feasibility study for the production of new wild medicinal and aromatic plants (chamomile, hyssop, lavender, etc...)	Produce wild medicinal and aromatic plants in MoA nurseries	Publications to promote wild medicinal and aromatic plants	Extension on value addition of wild medicinal and aromatic plants (drying essential oil extraction)
	3.3.2 Rationalize and control of medicinal and aromatic plants harvesting							
<b>3.4 Supporting investment in the fisheries and aquaculture and improving sustainable management of the sector</b>	3.4.1 Strengthening the legislative and regulatory framework of fishing and aquaculture	Legislative framework for aquaculture (hygiene, transport, packaging, display)			Legal expert on aquaculture (6 months), International expert on marketing standards of marine products (15 months)			
	3.4.2 Promoting research and elaboration of development plans		Encourage applied research on the fisheries sector		Stocktaking study on the fisheries sector (supply, demand, evolution of stocks...)	Rehabilitation of MoA's Research Centres on Marine life	Extension on modern fishing techniques	Reactivate the Sectorial Committee on fisheries of MoA
	3.4.3 Fisheries Development		Programme on sustainable fishing through support for the replacement of fishing equipment	Hire and train fishing guards		Modernize the equipment of fishing guards		Assist in the modernization of the fisheries fleet through fishermen cooperatives
	3.4.4 Aquaculture development		Pilot aquaculture farm in saline waters					Extension on aquaculture
	3.4.5 Development of an information collection system		Information collection system on fisheries and aquaculture		Expert to develop an information collection system on fisheries and aquaculture			
<b>3.5 Modernizing the irrigation system in Lebanon and promoting the use of alternative sources of water and energy in agriculture</b>	3.5.1 Increasing irrigation water storage quantity and improvement of the distribution		Construction of 30 hill lakes (1 million cubic meters) connected to agricultural exploitations Construction of 500 individual hill lakes and water tanks annually Rehabilitate irrigation canals					Establish water user associations to manage the newly established hill lakes
	3.5.2 Using new technologies and raising the efficiency of irrigation at farm level		Support 50% of the cost of conversion to modern irrigation equipment for 1,000 Ha annually				Extension material on modern irrigation techniques	Five outreach seminars in each of the MoA centres annually
	3.5.3 Promote the use of treated wastewater in agriculture	Prepare new legislation on the use of wastewater in agriculture					Extension material on the use of wastewater in agriculture	Outreach sessions on the use of wastewater in agriculture
	3.5.4 Promoting the use of renewable energy in agriculture and irrigation		Plan on the use of alternative energy in agriculture		Plan on the use of alternative energy in agriculture			

**Track 4: Strengthening Agricultural Extension & Education**

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
4.1 Development of a pluralistic extension system	4.1.1 Activating the partnership between the public sector, universities, research centres and associations providing extension services		Develop a new integrated extension strategy	Training of MoA staff on new integrated extension strategy and communications tools with farmers (including social media)	Extension strategy expert (4 months)			Establish a multi-stakeholder network for sharing and management of agricultural knowledge
	4.1.2 Quality Assurance and control of extension services provided by all the parties	Revise the existing legislation on quality assurance of extension services	Develop an M&E system for extension services				New extension material in collaboration with LARI (5 per year)	Awareness sessions about new material
	4.1.3 Strengthening Agricultural Extension Centres		Extension plans at regional level Linkages with LARI stations in extension plans					
4.2 Activation of the official technical agricultural education according to market demand	4.2.1 Development of a policy for the official technical agricultural education				Study on improving agricultural education			
	4.2.2 Strengthening the management of agricultural schools	Review the bylaws & financing mechanism of agricultural schools			Legal + technical experts in agricultural education (3 months)	Rehabilitation of the 7 agriculture schools		
	4.2.3 Updating the curriculum of agriculture schools		Introduction of demand-driven new specialization in technical a agriculture education		Study on labour market in Agriculture			
	4.2.4 Enhance coordination between agriculture technical schools, LARI and the Faculty of Agriculture at the Lebanese University	Cooperation protocols with LARI and and the Faculty of Agriculture at the Lebanese University						

### Track 5: Strengthening Agricultural Research & Laboratories

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
5.1 Developing and strengthening capacities of the Lebanese Agricultural Research Institute (LARI) laboratories	5.1.1 Development of food safety laboratories at LARI and cooperation with accredited laboratories	Activate the cooperation with the Lebanese Atomic Energy Commission Laboratory (CNRS) for the residues analysis of veterinary drugs through a legal framework or a protocol of cooperation	<ul style="list-style-type: none"> <li>• Activate the 3 natural enemies laboratories (Tal Amara, Tyr and Abdeh)</li> <li>• Activate the seed laboratory in Tal Amara</li> <li>• Resume the work in vaccine production laboratory in Fanar</li> </ul>		<ul style="list-style-type: none"> <li>• Stocktaking study on current status of the food safety laboratories and their future needs</li> <li>• Obtain the ISO 17025 certificate (or other certification) for existing laboratories</li> </ul>	<ul style="list-style-type: none"> <li>• Rehabilitate &amp; equip all laboratories according to needs</li> <li>• Establish and equip water testing laboratories</li> <li>• Establish/upgrade soil &amp; olive oil laboratories</li> <li>• Establish a veterinary drugs quality and formulation analysis Laboratory</li> <li>• Acquire Near Infrared Reflectance (NIR) machines for forage tests</li> <li>• Construct greenhouses for the observation of the transmission of pathogens</li> <li>• Equip observation rooms on the transmission of quarantine diseases</li> </ul>		Increase laboratory tests by 50%
	5.1.2 Development of agricultural inputs related laboratories and creation of new ones							
	5.1.3 Development of plant health laboratories							
	5.1.4 Improving the control tests of veterinary drugs							
	5.1.5 Activating the forage laboratory							
	5.1.6 Strengthening the existing laboratories and establishing new labs for honey							
	5.1.7 Development of animal health laboratories							
5.2 Enhancing agricultural scientific research	5.2.1 Improving the productivity of sheep and goats through the development of animal breeding centre in Terbol station		<ul style="list-style-type: none"> <li>• Research programme on new sheep and goat breeds and races</li> </ul>	Comprehensive training of all laboratory according to available equipment and/or programmes and need		<ul style="list-style-type: none"> <li>• Increase the capacity of the sheep &amp; goat research centre in Terbol station and equip it with a semen laboratory</li> <li>• Establishing a virus and fungal diseases free mother plot for Lebanese olive varieties</li> </ul>		
	5.2.2 Establishing a virus and fungal diseases free mother plot for Lebanese olive varieties		<ul style="list-style-type: none"> <li>• Research programme on the different olive varieties</li> <li>• Research on the suitability of market-demanded varieties (crops with high market value and low water demand)</li> </ul>					
	5.2.3 Launching scientific research on varieties suitability		<ul style="list-style-type: none"> <li>• Research on use of treated wastewater &amp; greywater in specific crops</li> </ul>					
	5.2.4 Launching research on irrigation		<ul style="list-style-type: none"> <li>• Collaborate with CNRS to calculate water use through remote sensing</li> </ul>					
	5.2.5 Strengthening the early warning system		<ul style="list-style-type: none"> <li>• Widen the scope of the MoA-LARI early warning system and link it with agricultural centres and extension activities</li> </ul>					
5.3 Improving the conservation of biodiversity and genetic resources	5.3.1 Studying biodiversity in unprotected ecosystems				Study on ecosystems in pastoral lands and unexploited forests			
	5.3.2 Strengthening the research on biodiversity and plant genetic resources		Establish seed bank for the native varieties of Lebanon		Comprehensive study on the native plant varieties of Lebanon and their possible uses			Awareness campaign about the good use & conservation of genetic resources
	5.3.3 Conservation and production of seedlings of wild fruit trees and promoting their cultivation					Equip nurseries to produce seeds for indigenous and adopted local varieties		

**Track 6: Development of the Cooperative Sector & Mutual Funds**

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
6.1 Improving and strengthening the General Directorate of Cooperatives capacities	6.1.1 Strengthening and developing the human, administrative and material capacities of the General Directorate of Cooperatives		Programme for developing the human, Administrative and material capacities of the General Directorate of Cooperatives	Train 60 employees for a period of five days per year for 4 years Two overseas trainings for 10 employees	Expert in organizational capacity development for cooperatives (1 month) Punctual expertise in functional affairs, finances & accounting, cooperatives, mutual funds and actuary)			
	6.1.2 Enhancement of the functions and services provided by the General Directorate of Cooperatives		Provide assistance to the non-public sector to support cooperatives, mutual funds and unions					200 workshops, seminars and trainings to promote cooperative work and the importance of Unions of Cooperatives
6.2 Assessing the status of cooperatives and mutual funds	6.2.1 Evaluation of cooperatives and mutual funds		Evaluation of all existing cooperatives through physical field visits (1,700 visits)	Training of General Directorate of Cooperatives staff on the methodology to conduct the evaluation of the work of Cooperatives	Expert in the Evaluation of the work of cooperatives (2 months)			
	6.2.2 Implementation of the recommendations formulated in the evaluation of cooperatives and mutual funds report		New programmes for cooperatives and mutual funds will be proposed by the evaluation					
6.3 Re-activating the Cooperative Credit Union and the General National Union of Cooperative Associations	6.3.1 Activating the role of the Union of Cooperative Credit	Review and update the legislation related to the Union of Cooperative Credit and the General Union of Cooperative Associations	Launch new programs involving the Union of Cooperative Credit and the General Union of Cooperative Associations after the reviewing and updating relevant legislation and according to the recommendations of the evaluation					
	6.3.2 Activating the role of the National General Union of Cooperative Associations							
6.4 Supporting and activating the mutual fund for the insurance of agricultural sector against natural disasters	6.4.1 Review and assessment of the financial mechanism of Mutual fund for the insurance of the agricultural sector against natural disasters							
	6.4.2 Supporting the Mutual fund for the insurance of the agricultural sector against natural disasters		Lobby to provide assistance (from the national budget) to the mutual fund for the insurance of the agricultural sector from natural disasters					

**Track 7: Development of the Capacities of the Ministry of Agriculture**

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities	
7.1 Updating the organizational structure and reinforcing the role of MoA and its affiliated institutions (General Directorate of Cooperatives and the Lebanese Agricultural Research Institute) and updating the existing legislations and regulations governing the agricultural sector and MoA	7.1.1 Development of administrative work and simplification of administrative procedures in the General Directorate of Agriculture		Programme for the simplification of administrative transactions within MoA Establish/activate the Human Resources Unit Establish a performance evaluation system	Continuous administrative training of MoA staff	Review and update organizational structure and job descriptions across MOA and affiliated institutions			Fill the existing vacancies, particularly in management positions	
	7.1.2 Upgrading the financial management in the General Directorate of Agriculture		Develop a new system for preparing MoA's budget and Introduce performance-based budgeting						
	7.1.3 Activation of communication and media in the General Directorate of Agriculture			Training on media and communication	Develop a media and communication plan for MoA			Conduct outreach activities through the media	
	7.1.4 Strengthening and modernization of an integrated system for planning, monitoring and evaluation, risk management and fund raising at the General Directorate of Agriculture	Introduce risk management into the legislative texts		New Monitoring & Evaluation system for the activities and programmes of MoA	Conduct trainings on: <ul style="list-style-type: none"> <li>Planning, Monitoring and Evaluation,</li> <li>Internal audit,</li> <li>Risk management,</li> <li>Fundraising</li> <li>Agricultural policy formulation and analysis</li> </ul>	Develop a fundraising strategy for MoA Review and analyse farmer support policies and propose new ones			
	7.1.5 Upgrading and modernization of IT network and Documentation in the General Directorate of Agriculture			Complete the implementation of the recommendations of the assessment report on upgrading IT network and documentation		Prepare a disaster recovery plan for MoA			
				Cooperate with OMSAR for the implementation of e-government					
				Propose an information sharing mechanism among administrations (coordinated through the Council of Ministers)					
7.1.6 Strengthening the agricultural statistics and capacity development in economic research in the General Directorate of Agriculture			Establish a farmer register	Training on agricultural statistics and economic studies		Strengthen the statistics GIS unit	Prepare and publish economic studies in cooperation with other ministries		
			Establish an information and early warning system on food prices						
			Implement the national strategy for the development of the agricultural statistics: <ul style="list-style-type: none"> <li>- Develop agricultural statistics database</li> <li>- Elaborate a methodology and guidelines for collection, entry, analysis and reporting/publishing of agricultural statistics data</li> <li>- Conduct production surveys</li> </ul>						
7.1.7 Development of administrative and financial work, and research at the Lebanese Agricultural Research Institute			Implement the new organizational structure and activate the performance evaluation system (duplicate)	Administrative and financial training (duplicate)					
	7.1.8 Reviewing, updating and adopting new legislation governing the cooperative work	Committee to review and update legislative texts governing cooperatives work		Legal expert on cooperatives (5 months)					
	7.1.9 Continue reviewing and updating the legislation governing the mutual funds work	Committee to review and update legislative texts governing mutual funds work		Legal expert on mutual funds (5 months) and International expert (30 days)					
	7.1.10 Reviewing, updating and adopting new legislation and internal	Committee to review and update legislative texts related		Legal expert (3 months) Administrative expert (3 months)					

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
	regulation of the General Directorate of Cooperatives	to General Directorate of Cooperatives						
7.2 Developing MoA Capacities in Negotiation skills	7.2.1 Activating the coordination and cooperation with the international organisations and donors to elaborate a shared framework			Training on negotiation and communication skills	Mapping of all donor-funded projects on agriculture			Share information and conduct regular coordination meetings with donors
	7.2.2 Activating MoA role in the international agreements and conventions in order to improve the foreign trade, decision making and international standard setting			<ul style="list-style-type: none"> <li>• Training on lobbying and communication for international trade</li> <li>• Yearly training on rules of origin</li> <li>• Training on international agreements and foreign trade</li> </ul>	Analytical study on international agreements and conventions and their impact on agriculture and foreign trade			
7.3 Fostering partnerships with various stakeholders from the private and public sectors	7.3.1 Activating partnerships with the private sector and related administrations including the National Sectoral Committees within MoA	Develop the legislative and administrative framework for establishing Sectoral Committees			Prepare an action plan defining the work of Sectoral Committees			
	7.3.2 Coordination with the local partners, municipalities, civil society working in the field of rural and agricultural development							
7.4 Strengthening MoA capacities in disaster and crises management	7.4.1 Elaborating a response plan for disasters and crises affecting agriculture		Establish a committee to prepare a response plan for disasters and crises affecting agriculture (preparedness, management, adaptive measures)					Establish a communication network with partners working in the field of rural and agricultural development
	7.4.2 Creating a Disaster and Crises Management Unit	Develop the legislative framework for a disaster & crisis management unit at MoA						

**Track 8: Responding to the impact of Climate Change**

Indicator	Intervention	New legislation	New programmes	Training MoA staff	Studies / Contracted expertise	Equipment	Publications	Outreach and/or Other activities
<b>8.1 Facing the challenges posed by the climate change</b>	8.1.1 Mainstreaming of the Ministry of Agriculture activities related to climate change		Streamline climate change mitigation across the work of MoA		Conduct study about the impact of climate change on the agricultural sector			
	8.1.2 Introducing adaptation measures in the work of the Ministry of Agriculture						Comprehensive guide on response and adaptation measures	Establish a multi-stakeholder Climate Change Committee to advise on strategy and steer MoA's efforts
	8.1.3 Estimating greenhouse gas emissions from the agricultural sector, land use changes and forestry				Train MoA staff on how to calculate and reduce greenhouse emissions of agriculture	Study on greenhouse emissions by Lebanese agriculture		